

## Delivery's Super Awesome Guide to Rendering!

### Copy to the Desktop

1. In the Server, navigate to the Delivery folder>03\_Production\_Maya>scenes>05\_rendering and select the scene to render, copy it, and Paste onto Desktop>03\_Production\_Maya>scenes>05\_rendering.
2. Replace the file.

### Smooth Objects that need to be Smoothed

1. Select all of the objects that need to be smoothed. Hit 3.

### Render Layers

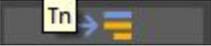
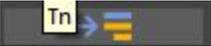
1. Before rendering, make sure the Render Layers tab appears in the Channel Box/Layer Editor. If Not:
  - a. Go to Windows>Settings>Preferences>Preferences>Rendering and change the Preferred Render Setup System to Legacy Render Layers
  - b. Close and Reopen Maya
2. Check if there are Render Layers to be rendered (Refer to Render Spreadsheet)
  - a. If so, there will be instructions on rendering on separate computers. Follow those directions accordingly
3. Enable/Disable the correct render layers using the clipboard icons:
  - a.  is enabled
  - b.  is disabled

### Cryptomattes

1. Refer to the Render Spreadsheet to check for cryptomatte. Most likely what is rendering will need one, with the exception of specific render layers.
2. Check the scene for a cryptomatte. In the outliner uncheck DAG Objects only and look for Cryptomatte. Select the Cryptomatte.
  - a. If there isn't a Cryptomatte, go to Render Settings>RenderMan>Features. In the Sample Filters[0] box, Right-Click and select Create PxrCryptomatte.
3. In the Attribute Editor, Make sure Layer is set to Name.

### AOVs and LPEs

1. For Isolating and rendering just the Character:
  - a. Create a custom AOV by clicking the left-hand plus button. Type LU or PE for whichever character you are creating an AOV for and press ok.
  - b. In the Channel Source box, type the LPE for the specific character:
    - i. For Percy: lpe:C<..'PE'>.\*[LO]
    - ii. For Lucy: lpe:C<..'LU'>.\*[LO]
  - c. In the right-hand column, click beauty.

- d. In the left-hand column, select the new Character LPE and then click the arrow button  .
  - e. Delete the Ci and a passes by selecting and then pressing the minus button for each.
2. Add the default list of AOVs.
    - a. In the right-hand column, click beauty.
    - b. In the left-hand column, go one by one and select and then click the arrow button  for each of the following:
      - i. Ngn
      - ii. dPdtime
      - iii. dPcameradtime
      - iv. id
      - v. z
      - vi. albedo
      - vii. directDiffuse
      - viii. directSpecular
      - ix. indirectDiffuse
      - x. \_\_depth
      - xi. subsurface
      - xii. shadow
  3. In the right-hand column, select shadow, then in the text box for Channel Source DELETE holdouts; so that it now displays lpe:unoccluded;C[DS]+<L.>
  4. Check the Render Spreadsheet for any custom AOVs. If there are:
    - a. Click the left-most Plus button, and enter the name listed on the Render Spreadsheet.
    - b. Select the new AOV in the left-most column, and in the Channel source type the Light Path Expression listed on the Render Spreadsheet.
    - c. Select beauty in the right-most column, then press the arrow button to add the new AOV. Press Create a New Node.

### Sampling

1. Go to the Sampling tab.
2. Check for any Special Parameters on the Render Spreadsheet and enter them in.
3. Set everything else to these settings:

**Sampling** | Features | AOVs | Advanced | Workspace

Min Samples 16  
Max Samples = 128  
Pixel Variance = 0.030  
Dark Falloff 0.010  
 Incremental

▼ IPR Samples

Max Samples 64  
Pixel Variance = 0.050

▼ Integrator

Integrator PxrPathTracer

**PxrPathTracer Parameters**

Max Depth 10  
Continuation Depth -1  
Stochastic Opacity Depth 0  
Sample Mode bxdf  
Light Samples 1  
BXDF Samples 1  
Indirect Samples 3  
 Allow Caustics  
 Accumulate Opacity

▼ Russian Roulette

Depth 4  
Threshold 0.200

▼ Indirect Clamping

Depth 2  
Luminance 10.000

▼ Default Ray Depth

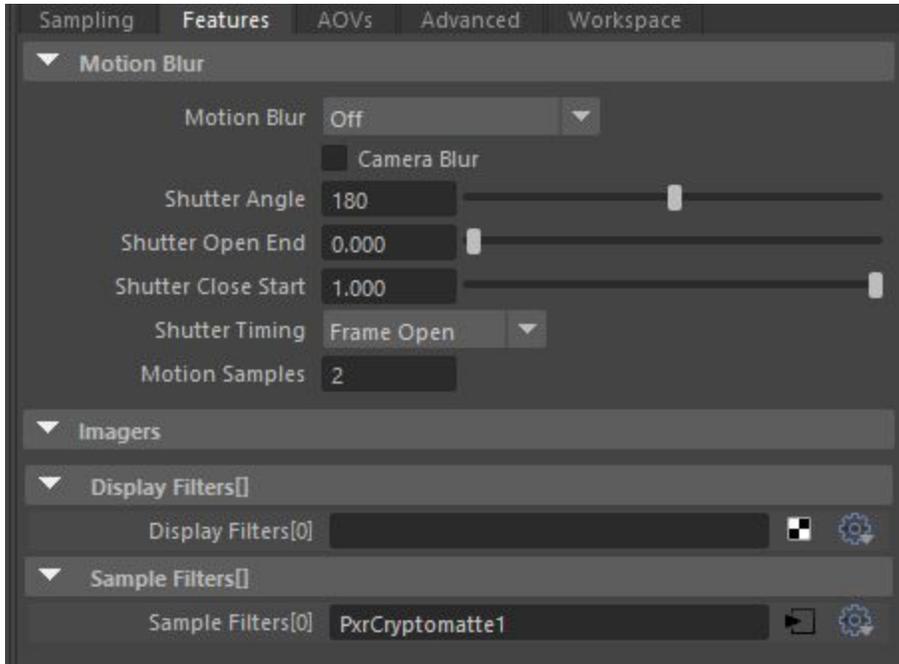
Max Specular Depth 6  
Max Diffuse Depth 2

▼ Filter

Filter gaussian  
Filter Size 2.000 2.000

## Features

1. Go to the Features tab.
2. Check for any Special Parameters on the Render Spreadsheet and enter them in.
3. Set everything else to these settings:



## Advanced

1. Go to the Advanced tab.
2. Check for any Special Parameters on the Render Spreadsheet and enter them in.
3. Set everything else to these settings:

Render Options

Output All Shaders  
 Reentrant Procedural  
Output Holdout Matte  Off  
 Enable Image Plane Filter  
 Learn Light Results  
 Adapt All  
Adaptive Sampler Standard  
Bucket Order circle  
Bucket Size 16x16  
Opacity Threshold 0.996 0.996 0.996  
Reference Frame 0

Dicing

Micropolygon Length 1.000  
 Watertight Dicing  
Dice Camera World Camera  
Reference Camera

Hair

Min Hair Width 0.500

Trace

Auto Bias  
Trace Bias 0.001  
Trace World Origin camera

Open Shading Language

Enable Batched OSL  
OSL Verbosity 0 - Silent  
OSL Statistics Level 0

Deep Rendering

Quality 0.750

Crop Window

Enable  
Top Left 0.000 0.000  
Bottom Right 1.000 1.000

▼ IES Profiles  
 Scene units to meters   
 Ignore Watts

▼ Cache Sizes  
 Texture   
 Geometry   
 opacity Cache

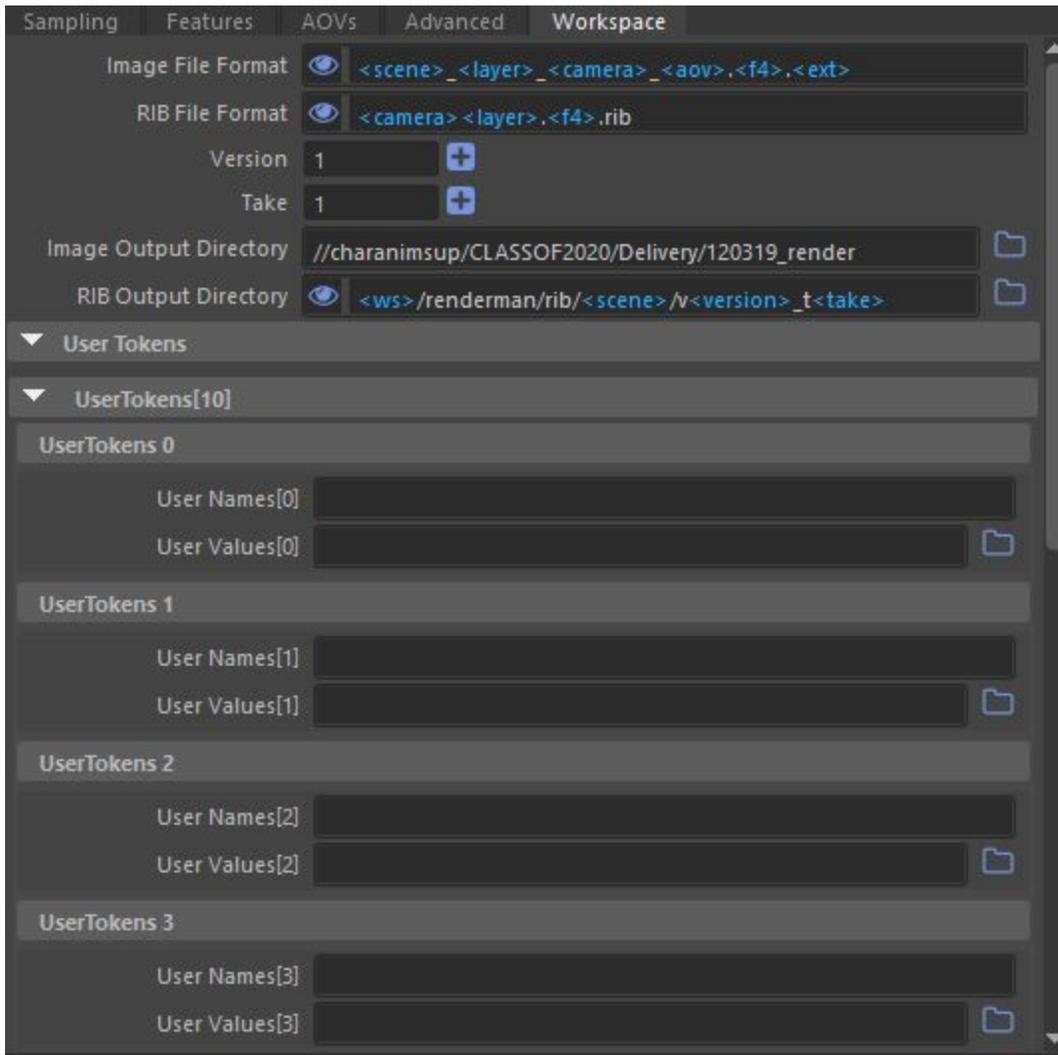
▼ Statistics  
 Level  ▼  
 XML File

▼ LPE Lobe Mappings  
 Reload lobe definitions

Diffuse 2 Lobe ID	Diffuse,HairDiffuse
Diffuse 3 Lobe ID	Subsurface
Specular 2 Lobe ID	Specular,HairSpecularR
Specular 3 Lobe ID	RoughSpecular,HairSpecularTRT
Specular 4 Lobe ID	Clearcoat
Specular 5 Lobe ID	Iridescence
Specular 6 Lobe ID	Fuzz,HairSpecularGLINTS
Specular 7 Lobe ID	SingleScatter,HairSpecularTT
Specular 8 Lobe ID	Glass
User 2 Lobe ID	Albedo,DiffuseAlbedo,SubsurfaceAlbedo,HairAlbedo
User 3 Lobe ID	Position
User 4 Lobe ID	UserColor
User 5 Lobe ID	
User 6 Lobe ID	DiffuseNormal,HairTangent,SubsurfaceNormal,SpecularNormal
User 7 Lobe ID	
User 8 Lobe ID	
User 9 Lobe ID	
User 10 Lobe ID	
User 11 Lobe ID	
User 12 Lobe ID	

Workspace

1. Go to the Workspace tab.
2. Check for any Special Parameters on the Render Spreadsheet and enter them in.
  - a. For the Image Output Directory, click on the folder icon next to it and navigate to the location on the Server. If the folder for the final output doesn't exist, make a New Folder and Rename it.
3. Set everything else to these settings:



#### Common

1. Go to the Common Tab.
2. Set the Frame Range to Animation and set the Start frame and End frame to the numbers on the Render Spreadsheet.
3. Set the Renderable Camera to the camera listed on the Render Spreadsheet. Make sure Alpha Channel (Mask) is checked.
4. Set the Image Size Presets to HD 1080.

#### Batch Render

1. Select RenderMan>Batch Render.
2. You can check on the progress via the Local Queue window.
3. If something goes wrong and the render job needs to be stopped, go to the Local Queue window, right click on the active job, and click delete job.